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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/694,884

10/29/2003

Koji Kanda

1560-0401P

4111

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EXAMINER

MCCLLOUD, RENATA D

ART UNIT

PAPER NUMBER

2837

NOTIFICATION DATE

DELIVERY MODE

03/25/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/694,884	Applicant(s) KANDA, KOJI	
	Examiner RENATA MCCLOUD	Art Unit 2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 10, 11 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 11, 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,10,11,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Discenzo (US 6097286) in view of Kurishige et al (US 6161068).

Claims 1,11: Discenzo teaches a steering apparatus (Fig. 1) which uses a steering motor (28) to supply a steering mechanism (30) with force corresponding to a steering amount applied to a steering member (22), comprising: a steering motor (28); a reaction force motor (Fig. 1:38); a torque sensor (Fig. 1:36) sensing the steering motor torque; a means for filtering a component within a frequency range out of the sensed torque (Col. 2: 54-65); and driving the reaction force motor (38) so as to supply the steering member with a force corresponding to the extracted component and the steering amount (Col. 2:54-3:10). Discenzo does not teach a current sensor, a vehicle speed sensor, a frequency range increasing and decreasing based on the vehicle running speed and having a range of about 3Hz to 15Hz, amplifying the component with an amplification factor which increases as the vehicle decreases and decreases as speed increases, setting a target value of steering and adding to the target value another value of steering force corresponding to the extracted component, and driving the motor with a force corresponding to the sum of the target value and the another value. Kurishige et al teach a current sensor (9) and that torque is proportional to current (Col. 1:44-54), a vehicle speed sensor (col.3:52-58) a frequency range increasing and decreasing based on the vehicle running speed and having a range of about 3Hz to 15Hz (col. 5:44-48) amplifying the component with

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an amplification factor which increases as the vehicle decreases and decreases as speed increases (fig. 9a), setting a target value of steering and adding to the target value another value of steering force corresponding to the extracted component, and driving the motor with a force corresponding to the sum of the target value and the another value(col. 6:8-18) . It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus taught by Discenzo to sense current and control the steering force as taught by Kurishige in order to provide an assist torque to the motor and reduce discomfort to the driver.

Claims 10, 20: Discenzo teaches the steering member (Fig. 1: 2) and mechanism (Fig. 1: 30) are not mechanically connected (Col. 1:19-25,41-44).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RENATA MCCLOUD whose telephone number is (571)272-2069. The examiner can normally be reached on Mon.- Fri. from 5:30 am - 2pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on (571) 272-2800 ext. 37. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Renata McCloud/
Primary Examiner, Art Unit 2837

/R. M./
Examiner, Art Unit 2837

<i>Application Number</i> 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/694,884	KANDA, KOJI	
	Examiner	Art Unit	
	RENATA MCCLOUD	2837	